# PowerStay™ BY GEN/TRAN POWER CENTER

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**For Models R2060, R3060, R5010, R2020, R3020, R5020, R6010, R6020, R1020, R1220**

***All models are suitable as service entrance equipment.***

## INSTALLATION AND OPERATING INSTRUCTIONS

***Warning**: Gen/Tran transfer switches should be installed by a professional electrician familiar with electrical wiring and codes, and experienced in working with generators. Gen/Tran accepts no responsibility for accidents, damages or personal injury caused by incorrect installation. These transfer switches are intended for surface mounting outdoors or indoors.*

***Caution**: If using the generator and transfer switch for larger appliances, such as electric water heaters, clothes dryers, electric ranges and small air conditioners, check the labels on the appliances to be sure they do NOT exceed the rating of the generator. No appliance should have an amperage rating that exceeds the "GENERATOR MAIN" rating in the transfer switch.*

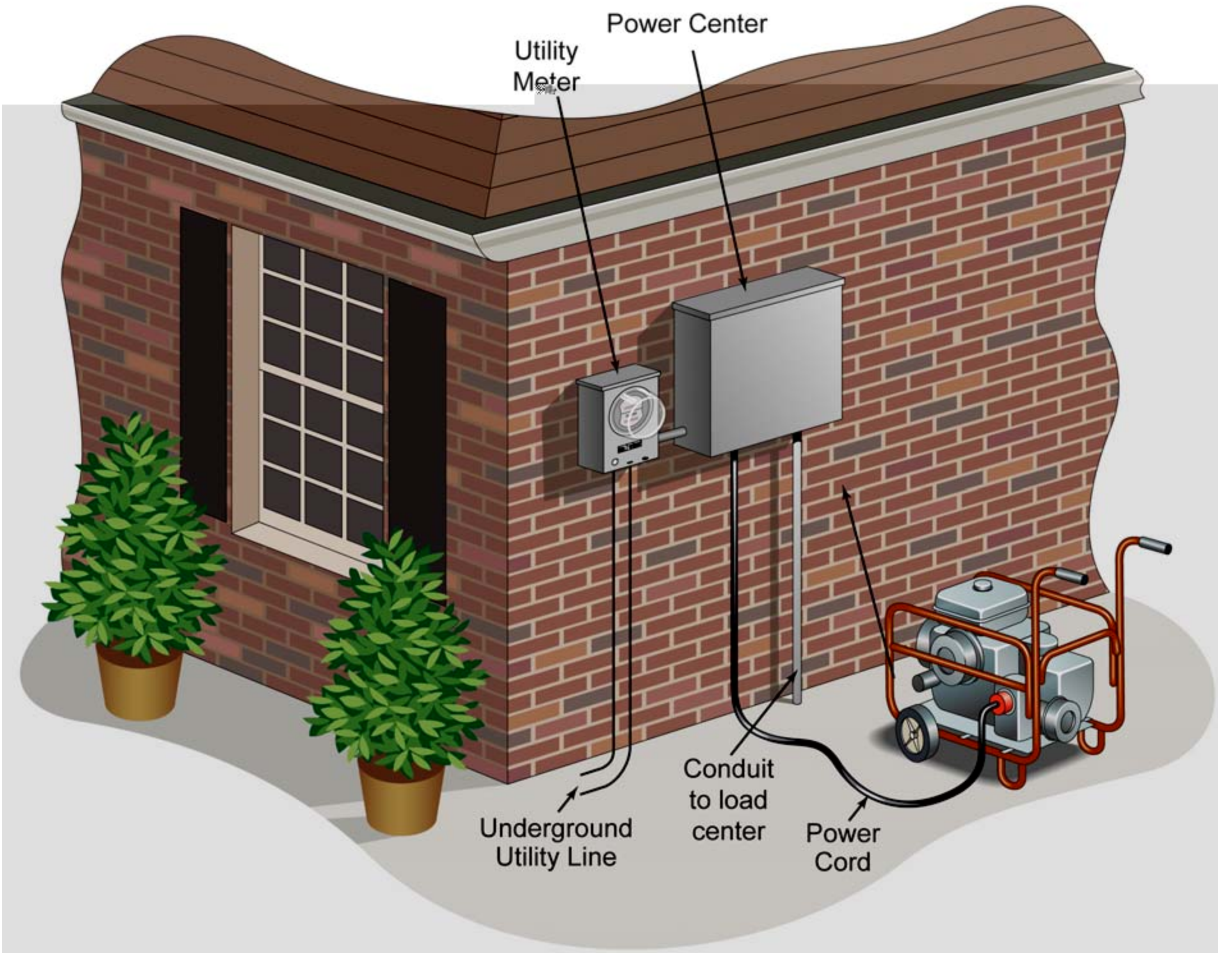
*Thank you for purchasing the finest manual transfer switch available today. Gen/Tran's Power Centers are designed to safely connect generators to load centers in homes and light commercial buildings (single phase only) for standby power applications. Features include:*

- *Generator Main and Utility Main mechanically interlocked preventing utility or generator power back feed*
- *Full branch circuit protection with Siemens® circuit breakers*
- *Optional GFCI, Arc Fault or Surge Protection circuit breakers to further protect your home and electronic equipment (Available from Gen/Tran)*
- *High Corrosion-resistant aluminum cabinet*

### Items Needed for Installation:

- ¼" and 11/32 nut drivers
- Straight blade and Phillips screwdriver
- Large Allen Wrench Set
- Electric drill
- Wire cutter/stripper
- Anchors and screws to mount switch to wall
- Power Cord to connect generator to switch.

### Typical Power Center Installation:



# What is the Power Center?

The PowerStay™ Power Center is a combined indoor/outdoor transfer switch and distribution panel. It can be used as service entrance equipment for 60 Amp, 100 Amp and 200 Amp services. In addition to being a transfer switch, the Power Center adds additional circuits for outdoor applications such as air conditioner compressors, sewage lift pumps, boat docks, outbuildings, garages, pump houses, barns and the like. The 200 amp series models will accommodate 12 single pole circuits, and the 60 amp and 100 amp series models will accommodate 16 single pole circuits.

The Power Center is made up of five basic elements:

1. Utility Main Breaker
2. Generator Main Breaker
3. A 20, 30 or 50 amp 125/250 volt inlet prewired to the generator breaker
4. A mechanical safety interlock that prevents both Mains from being "ON" at the same time
5. A set of sub-feed lugs to handle cable up to 4/0 AWG to feed the house Main panel.

CAUTION: If the PowerStay™ Power Center is used as the main service disconnect, it is imperative that all circuit breakers in the Power Center AND the Main load center in the house be turned OFF when running the system from the generator. Then, turn on only the breakers that the generator can handle at any one time. Check the generator "continuous" wattage rating to determine the total wattage of connected load. It may be necessary as well as desirable to turn On and Off different loads/breakers as needed during an actual power outage.

# Installation Procedure:

### For"Plug-in" Generator Connection (Models R2020, R3020, R5020, R2060, R3060, R5010):

1. Power Center can be installed above, below or on either side of the utility meter socket. However, the preferred location is to the RIGHT of the meter socket since the location of the lugs for the Utility Main are on the Left side of the Power Center. Knockouts (KO) are provided only in the bottom of the enclosure. However, since the enclosure is aluminum, it is easy to cut in the desired knockout. If the KO is cut in above the live terminals of the circuit breakers, a watertight hub should be used. NOTE: If a 2" KO is cut in the side of the Power Center enclosure, the dead front panel may need to be "notched" to clear the 2" fittings. The back of the KO must be 3/8" from the rear of the enclosure.

2. Loosen the thumb screw from the cover of the Power Center, and slide the cover down to remove.

3. Remove the two screws from the bottom of the dead front. On the 200 amp models, remove the two Nylok nuts securing the interlock mechanism. When the cover is pulled forward, the snap-in circuit breaker will fall out. Set the front cover and dead front aside for reinstallation after wiring.

4. The mounting holes in the back of the Power Center are on 16" centers so they could line up on your studs if desired. Use all four holes to mount the enclosure.

5. On 200 amp models, select the bottom center 2" KO to exit to the Main distribution panel. On the lower amperage Power Center models, use one of the smaller KOs to exit. Terminate the LOAD wires in the landing lugs on the bottom of the bus assembly, one of the Neutral lugs and the Ground lug on the right side of the enclosure.

6. Terminate wires from the meter socket into the utility Main breaker on the left side, and the Neutral into the unused lug on the insulated neutral bar.

7. Plug in and wire any additional circuit breakers in the spaces provided. Installer will need to remove any hold-down strap to insert additional circuit breakers. Re-install hold-down strap after breakers are inserted.

8. Reinstall dead front cover and interlock mechanism if removed earlier. Fill any unused spaces in the dead front with the closing plates provided.

9. Reinstall cover.

**For "Hard-wired" Generator Connection: (Models R6010, R6020, R1020, R1220)**

1. Follow steps 1 - 6 as described above.

2. Installer to determine size of conduit for bringing power from generator to the Power Center. KOs on bottom of Power Center should be used, although alternate entry is adequate when necessary. Watertight hubs should be used above live breaker terminals. NOTE: If a 2" KO is cut in the side of the Power Center enclosure, the dead front panel may need to be "notched" to clear the 2" fittings. The back of the KO must be 3/8" from the rear of the enclosure.

3. Terminate wires from generator to "Generator Main" circuit breaker lugs on the Right side of the bus assembly. Terminate neutral and ground wires into the appropriate bars provided.

4. Proceed with steps 7, 8 and 9 as described above.

**TABLE 1 - SPECIFICATIONS:**

| MODEL # | R2060 | R3060 | R5010 | R2020 | R3020 | R5020 |
|---|---|---|---|---|---|---|
| UTILITY MAIN breaker, Included | 60 Amp | 60 Amp | 100 Amp | 200 Amp | 200 Amp | 200 Amp |
| GEN MAIN breaker, included | 20 Amp | 30 Amp | 50 Amp | 20 Amp | 30 Amp | 50 Amp |
| Max Load per Circuit | As marked | As marked | As marked | As marked | As marked | As marked |
| Max Load on Generator | 20 Amp | 30 Amp | 50 Amp | 20 Amp | 30 Amp | 50 Amp |
| Max Watts @ 250 Volt | 5000 | 7500 | 12,500 | 5000 | 7500 | 12,500 |
| Max Watts @ 125 Volt | 5000 | 7500 | 12,500 | 5000 | 7500 | 12,500 |
| Max 1-pole Circuits * | 16 | 16 | 16 | 12 | 12 | 12 |
| Max 2-pole Circuits * | 8 | 8 | 8 | 6 | 6 | 6 |
| NEMA Config. of Inlet | L14-20 | L14-30 | CS6365 | L14-20 | L14-30 | CS6365 |
| Min. gauge Cord Size | 12/4 wire | 10/4 wire | 6/4 wire | 12/4 wire | 10/4 wire | 6/4 wire |

**TABLE 1A – SPECIFICATIONS:**

| MODEL # | R6010 | R6020 | R1020 | R1220 |
|---|---|---|---|---|
| UTILITY MAIN breaker, Included | 100 Amp | 200 Amp | 200 Amp | 200 Amp |
| GEN MAIN breaker, included | 60 Amp | 60 Amp | 100 Amp | 125 Amp |
| Max Load per Circuit | As marked | As marked | As marked | As marked |
| Max Load on Generator | 60 Amp | 60 Amp | 100 Amp | 125 Amp |
| Max Watts @ 250 Volt | 15,000 | 15,000 | 25,000 | 30,000 |
| Max Watts @ 125 Volt | 15,000 | 15,000 | 25,000 | 30,000 |
| Max 1-pole Circuits * | 16 | 12 | 12 | 12 |
| Max 2-pole Circuits * | 8 | 6 | 6 | 6 |
| NEMA Config. of Inlet | N/A | N/A | N/A | N/A |
| Min. gauge Cord Size | Hardwired | Hardwired | Hardwired | Hardwired |

*NOTE: if Ground Fault Circuit Interrupting (GFCI) breakers, Arc-Fault breaker or surge protecting circuit breakers are used in the Power Center, they will reduce the maximum number of circuits from the number shown in the table above. Also if circuit breakers larger than 50 amps are used as sub-feed breakers, the maximum number of circuit breakers will also be reduced. Contact Gen/Tran at 1-888-GEN-TRAN for more information on GFCI, Arc-Fault and Surge Protecting circuit breakers.*

# Operating Your Power Center Transfer Switch:

## Transferring from Utility Power to Generator Power:

1. Move generator outdoors. **WARNING: Operating a generator indoors or in a garage could result in injury or death**.
2. Insert the male plug of the Power Cord into the correct outlet on the generator.
3. Plug in the female connector of the Power Cord to the inlet (if provided) located on the bottom of the Power Center.
4. Turn OFF all circuit breakers in the Power Center and Main load center.
5. Start the generator outdoors, following the procedures described in the generator's owner's manual furnished by the manufacturer.
6. Turn ON the GENERATOR MAIN circuit breaker in the Power Center.
7. Turn ON individual circuit breakers in the Power Center and the Main load center up to the continuous wattage rating of your generator. If the Generator Main breaker trips, you have overloaded the generator. Some circuit breakers must be turned OFF to avoid damage to the generator or to the loads being connected.

## Transferring from Generator Power to Utility Power:

1. On the Power Center, turn OFF Generator MAIN breaker and turn ON Utility MAIN breaker. On 200 amps Main breaker models, this will require sliding the interlock mechanism up with the left hand while turning ON the 200 amp circuit breaker.
2. Turn ON any branch circuit breakers in the Power Center and Main Load center that are OFF.
3. Shut down the generator, following the procedures in the generator Owner's Manual.
4. Unplug the power cord from the Power Center and then the generator.
5. Let the generator cool down before storing in a dry, secured location.
6. To ensure that your generator will work properly when you need it, it is important to start and run your generator under load regularly and keep the tank filled with fresh fuel. Perform the above steps at least ONCE A MONTH to keep the generator properly "exercised."

### TABLE 2 - Wire Connector Usage Chart:

| WIRE SIZE | 12 | 10 | 8 | 6 |
|---|---|---|---|---|
| **14** | Red | NA | NA | NA |
| **12** | Red | Red | NA | NA |
| **10** | NA | Red | NA | NA |
| **8** | NA | NA | Blue | Blue |
| **6** | NA | NA | Blue | Blue |

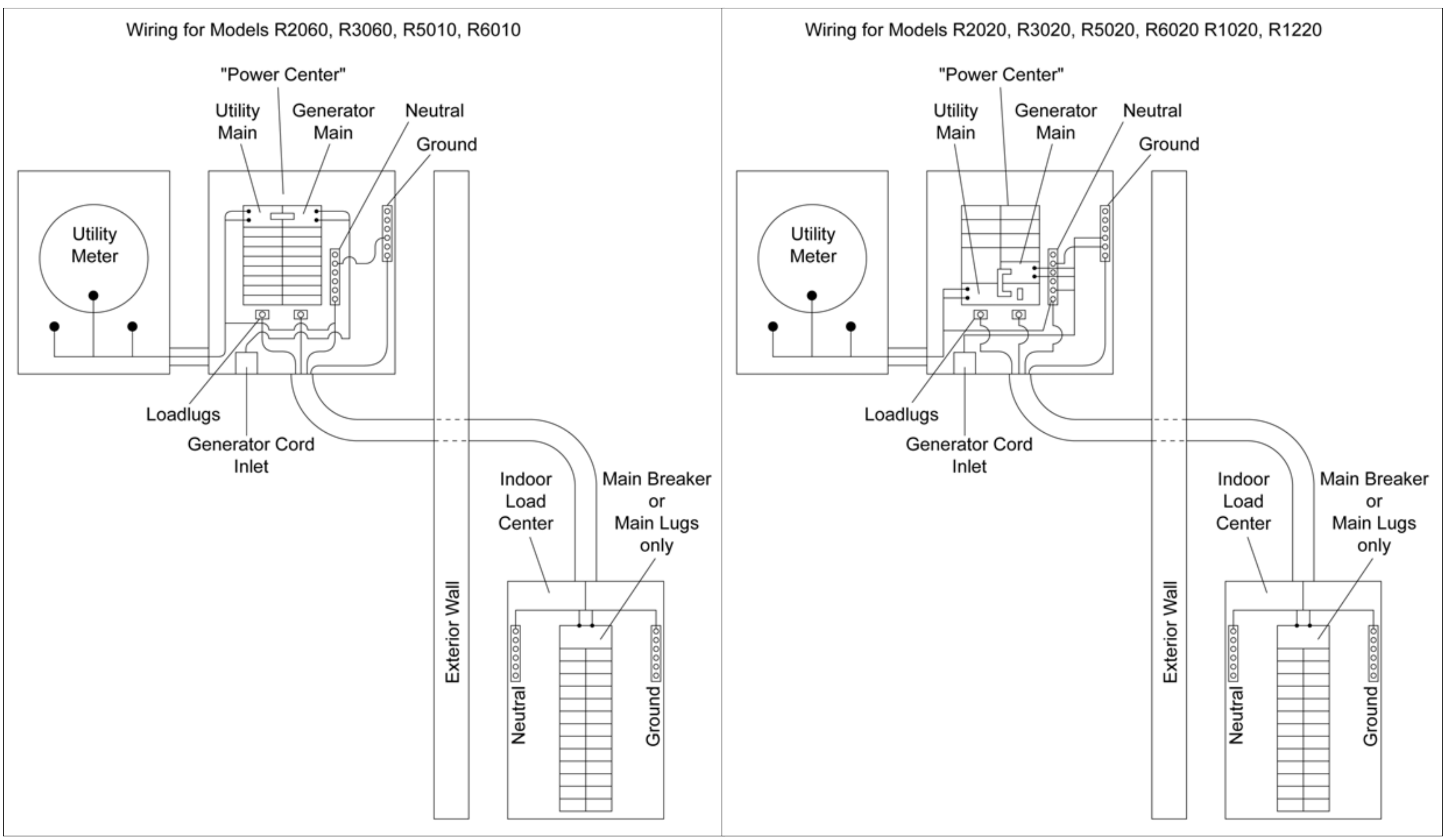
### TABLE 3 – Compatible Circuit Breaker Types:

- Siemens QP, QT, QPH, HQP, QPF, QPHF, QFP, QE, QEH
- Cutler Hammer/Westinghouse Series BD, BR, BQ, GFC
- Challenger Type A, C, HAGF
- Square D Series HOM
- GE Series THQL

### Compatible GFCI, Arc-Fault/ Surge Protection Circuit Breakers:

- Siemens: QPF (GFCI), QAF (Arc Fault), QP (Surge Protector)

# WIRING DIAGRAMS:




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